Appln. No. 10/582,929

Atty. Docket No. 2003B136/2

Response dated March 5, 2009

Reply to OA dated November 6, 2008

**Amendments to the Claims:** 

This listing of claims will replace all prior versions and listing of claims in this

application.

**Listing of Claims:** 

1. (Currently Amended) A process for the conversion of an olefin in a reactor, wherein

the conversion reaction is selected from the group consisting of (i) oligomerisation of

an olefin and (ii) alkylation of an olefin with at least one compound selected from the

group consisting of aromatic and phenolic compounds, the process comprising

continuously passing a feed comprising an olefin and water through a bed of catalyst

under conversion conditions to form a conversion product, wherein the water content

of the feed is greater during the initial phase of the process of conversion than at the

latter phase of the process of conversion.

2. (Original) The process according to claim 1 in which the water content of the

feed is automatically controlled according to an analysis of the composition of the

reaction feed.

3. (Original) The process according to claim 2 comprising introducing water into the

feed by a water wash.

4. (Original) The process according to claim 3 comprising coalescing the wash

water before it is passed to the reactor.

5. (Original) The process according to claim 1 wherein the water content of the feed

is controlled by at least one method selected from the group consisting of (a)

introducing water into the feed, (b) drying the feed and (c), in the case where a water

wash is used, adjusting the temperature of the water wash.

6. (Original) The process according to claim 2 wherein an on-line analyser is

provided to determine the composition of the reaction feed as it is fed to the reactor.

7. (Original) The process according to claim 2 in which the analysis of the reactor

feed also includes a measure of the concentration of oxygenated components.

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8. (Currently Amended) The process according to claim 1 in which the conversion products are separated from unreacted olefins and/or diluent.

- 9. (Currently Amended) The process according to claim 8 in which the unreacted olefins and/or diluent are recycled to the reactor.
- 10. (Original) The process according to claim 1 in which the conversion is performed in a tubular reactor.
- 11. (Original) The process according to claim 1 in which the conversion is performed in a chamber reactor.
- 12. (Original) The process according to claim 1 wherein the conversion reaction is oligomerisation and the conversion product comprises C5 to C20 olefins in the boiling range of about 30°C to about 310°C.
- 13. (Original) The process according to claim 1 which comprises the oligomerisation of a mixture of C3 and C4 olefins.
- 14. (Original) The process according to claim 1 wherein the conversion is oligomerisation of at least one olefin selected from the group consisting of ethylene, propylene, butenes and amylenes to produce C6 to C15 olefins.
- 15. (Cancelled)
- 16. (Currently Amended) The process according to <u>claim 1</u>, <u>wherein elaim 15 in which</u> the conversion products are desulphurised.
- 17. (Original) The process according to claim 1 in which the catalyst comprises a zeolite catalyst.
- 18. (Original) The process according to claim 17 wherein the conversion conditions include a temperature from about 110°C to about 310°C.
- 19. (Original) The process according to claim 1 in which the catalyst comprises a solid phosphoric acid.

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- 20. (Original)The process according to claim 19 wherein the conversion conditions include a temperature from about 200°C to about 300°C.
- 21. (New) The process of claim 1, wherein the content of water in the feed is in the range of 450 to 800 wt ppm and then is reduced to be in the range of 250 to 400 wt ppm